UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 February 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The following is a final office action in response to communications received

02/08/05. Claims 1, 2, 17, 18, 33, and 34 have been amended. Claims 1-48 are pending.

Response to Amendment

2.   Applicant's amendment to claim 18 is sufficient to overcome the claim objection

set forth in the previous office action.

3.   Applicant's amendments to claims1, 17, and 33 are sufficient to overcome the 35

USC § 112, second paragraph rejections set forth in the previous office action.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the
> United States before the invention thereof by the applicant for patent, or on an international application
> by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
> title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5.   Claims 1-2, 9-11, 17-18, 25-27, 33-34, and 41-43 are rejected under 35

U.S.C. 102(e) as being anticipated by Mowery et al. (U.S. 5,983,198).

6.   As per claim 1, Mowery et al. teaches a method of tracking and predicting the

capacity utilization of a goods delivery system, the system having at least one delivery

and at least one delivery zone comprising a geographic area comprising a zip group

having at least one zip code, each delivery agent having at least one delivery vehicle

comprising at least one delivery vehicle slot, each delivery vehicle slot defined as a

portion of the at least one delivery vehicle used to deliver a good, the goods delivery

system providing a respective first potential delivery date, a respective order, and the

number of slots the respective order will fill, said method of tracking capacity utilization

comprising the steps of:

determining a delivery agent capacity utilization matrix comprising a plurality of

delivery slots for each zone, the plurality of delivery slots relating the total number of

delivery vehicle slots for the delivery agent and defining a delivery capacity of the

delivery agent (See column 7, lines 13-30 and 40-46, column 8, lines 40-46, column 9,

lines 1-25, wherein a capacity matrix maintains information concerning delivery slots

needed per zone, these slots related to the capacity slots of the delivery agent and

defining the capacity needed to be filled in the agent for delivery);

determining a respective zone maximum number of delivery slots and a respective

number of used delivery slots for a specified period of time within the respective delivery

zone (See at least figures 1, 4 and 5, column 2, lines 40-51, column 3, lines 51-54,

column 4, lines 18-32,column 5, lines 50-60, column 8, lines 24-29 and 61-67, and

column 9, lines 1-14, wherein a delivery zone is an area with a group neighboring

customers, which would be in at least one zip code, that have tanks with usages that allow

for servicing. Each customer's tank has a maximum, so the zone has a total maximum

for delivery. The availability of each customer's tank is measured by delivery slots.

Figure 4 specifically discloses these slot levels. Figure 1 shows the multiple tanks in a zone);

determining whether the respective order can be shipped on the first potential ship date based on the number of available delivery slots, wherein said respective number of available delivery slots is equal to said respective zone maximum number of delivery slots minus said respective number of used delivery slots (See figures 4 and 5, column 2, lines 40-51, column 3, lines 51-54, column 8, lines 14-29 and 61-67, and column 9, lines 1-13 and 20-25, which discuss determining whether an order can be shipped on a potential ship date per customer is based on the available slots (levels) in the specific tank. Each customer's delivery availability is determined by the tank maximum (L_3) minus the number of used slots (L_2). See specifically figures 4 and 5. The trucks of the fleet work to minimize delivery cost based on the availability of the capacity for delivery of the customers in each zone);

returning a respective date that the respective order can be delivered (See column 9, lines 1-25, which discusses the processor determining the delivery schedule and returning schedule dates for a respective order (representing when to make each delivery) based on the delivery zone requirements); and

updating the respective delivery agent capacity utilization matrix for the above specified period after the respective order has been included within said respective number of used delivery slots (See figure 5, column 3, lines 50-55, column 4, lines 1-45 and 56-61, column 5, lines 30-50, column 7, lines 15-33, and column 9, lines 1-13, wherein the central system is updated to reflect the scheduled delivery of the goods and the respective number of slots (levels) of capacity delivered and utilized in a period).

7.   As per claim 2, Mowery et al. discloses wherein the plurality of delivery slots

define a delivery capacity of the delivery agent, the step of updating the respective

capacity utilization matrix further comprises the step of calculating a workload utilization

and storing the result in a workload value for each of said respective slots with the

delivery zone (See figure 5, column 3, lines 35-50, column 5, lines 30-50, column 6, lines

1-13 and 20-36, column 7, lines 15-33, column 8, lines 40-46, and column 9, lines 1-25,

wherein the plurality of delivery slots to which deliveries can be made defines the

capacity needed on the delivery agent.   The central system runs analysis on the data to

calculate the workload utilization of the plant and this determined value of workload and

usage for a respective delivery zone is stored at the central system).

8.   As per claim 9, Mowery et al. teaches the method further comprising the step of

predicting the probability of a future respective used slot being full based on historical

over capacity conditions (See figure 5, column 2, lines 40-51, column 3, lines 50-55,

column 4, lines 1-3 and 33-45, column 5, lines 36-55 and 60-65, column 6, lines 1-13 and

18-37, column 8, lines 61-67, and column 9, lines 1-7, wherein the probability of future

usage and slots (levels) being full is determined using historical data, such as over

capacity condition).

9.   As per claim 10, Mowery et al. teaches wherein the step of predicting the

probability of a future respective used slot being full further comprises the steps of:

        obtaining the workload values for a predetermined period of time (See figure 5,

column 2, lines 40-51, column 3, lines 50-55, column 4, lines 1-3 and 33-45, column 5,

lines 36-55 and 60-65, column 6, lines 1-13 and 18-37, column 8, lines 61-67, and

column 9, lines 1-7, wherein workload data is stored and obtained for a predetermined

period of time); and

determining the probability that the next used time slot will meet an over capacity

condition using a distribution function (See figure 5, column 2, lines 53-67, column 5,

lines 36-55 and 60-65, and column 6, lines 1-13 and 18-37, wherein forecasting is done to

determine the probability that the next used slot will meet an over capacity condition. A

distribution function is used to look at the data);

wherein said over capacity condition is defined as the state when the workload

value is greater than or equal to 100 percent (See figure 5, wherein the over capacity

condition is defined as a workload value over 100 percent).

10.   As per claim 11, Mowery et al. teaches the step of predicting whether the trend

line of the capacity utilization is changing (See at least figure 5 and column 5, lines 35-55

and 60-55, and column 6, lines 18-36, which discuss predicting whether the trend line of

the capacity usage of a plant is changing looking at historical usage data).

11.   Claims 17-18, 25-27, and 33-34 recite equivalent limitations to claims 1-2, 9-11,

and 1-2, respectively, and are therefore rejected using the same art and rationale relied

upon above in the rejection of claims 1-2, 9-11, and 1-2, respectively.

12.   As per claim 41, Mowery et al. teaches a method of predicting capacity utilization

of a goods delivery system, the system having at least one delivery zone, each delivery

zone having a capacity utilization matrix comprising a plurality of slots each slot having

an associated workload value, said method of predicting the capacity utilization

comprising the steps of:

predicting the probability of a future respective used slot being full based on

historical over capacity conditions (See figure 5, column 2, lines 40-51, column 3, lines

50-55, column 4, lines 1-3 and 33-45, column 5, lines 36-55 and 60-65, column 6, lines

1-13 and 18-37, column 8, lines 61-67, and column 9, lines 1-7, wherein workload data is

stored and obtained for a predetermined period of time, this historical data used to predict

and forecast about each customer's future slot's usage and over capacity conditions);

predicting whether the trend line of the capacity utilization is changing (See

column 8, lines 30-40, which discusses looking at a trend line to predict and forecast if

the capacity usage is changing. See also figure 5 and column 2, lines 53-67, column 5,

lines 36-55 and 60-65, and column 6, lines 1-13 and 18-37, wherein forecasting is done to

determine the trend and identify changes).

13.   Claims 42-43 recite equivalent limitations to claims 10-11, respectively, and are

rejected using the same art relied upon in the rejection of claims 10-11, respectively.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-8, 12-16, 19-24, 28-32, 35-40, and 44-48 are rejected under 35 U.S.C.

103(a) as being unpatentable over Mowery et al. (U.S. 5,983,198).

15.   As per claim 3, Mowery at al. teaches the method wherein the step of calculating

the capacity utilization comprises the step of calculating said respective workload value,

wherein said respective workload value analyzes the last workload and the number of

filled slots of the delivery versus the zip group maximum (See figure 5, column 3, lines 35-50, column 4, lines 12-45 and 56-61, column 5, lines 30-35, 47-50, and 60-65, column 6, lines 1-13 and 20-36, column 7, lines 15-33, and column 9, lines 1-13, wherein the central system runs analysis on the data to calculate the workload utilization of the plant. The capacity usage of a plant is analyzed to determine the workload of the plant. An analysis is run by the central system to determine the patterns in a plant's workload which looks at the last workloads of a previous period and the current amount put in each tank in the current period (the fraction of each tank filled on the current delivery)). However, Mowery et al. does not expressly disclose that the relationship of the workload value is represented by the specific formula of workload value = (last workload + (number of filled slots) / (zip group maximum)).

Mowery et al. presents an algorithm that is used to determine the workload of a plant. Representing functional relationships in equation form is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to represent this functional relationship in equation form in order to more accurately represent the functional relationship so that it is easier to comprehend and use by others. By creating a more accurate means of determining workload, the company can achieve the goal of Mowery et al. of minimizing delivery costs, see at least column 5, lines 50-60.

16.   As per claim 4, Mowery et al. discloses the method further comprising the step of setting a respective capacity signal when an over capacity condition and an under capacity condition has been detected (See figures 4 and 5, column 3, lines 50-54, column 4, lines 1-3 and 18-38, column 7, lines 34-43, column 8, lines 61-67, and column 9, lines

1-13, which discusses capacity signals when an over capacity or under capacity situation

has been detected. This is done for each customer).

17.   As per claim 5, Mowery et al. teaches the method comprising the step of setting a

respective over capacity flag after determining that the sum of a set of said preselected

workload values are greater than a predetermined over capacity value over a historical

time period (See column 2, lines 40-51, column 3, lines 50-55, column 4, lines 1-3 and

33-45, column 5, lines 36-55 and 60-65, column 6, lines 1-13 and 18-37, column 8, lines

61-67, and column 9, lines 1-7, wherein workload data is stored and obtained for a

predetermined period of time. See figures 4 and 5, column 3, lines 50-54, column 4, lines

1-3 and 18-38, column 7, lines 34-43, column 8, lines 61-67, and column 9, lines 1-13,

which discusses capacity signals (flags) when over capacity situations are detected in

workload (usage) historical data. Deliveries cannot be made when the set of workload

values for each customer are greater than an over capacity value).

18.   As per claim 6, Mowery et al. teaches the method wherein the preselected

overcapacity values are set for the delivery zone/capacity matrix and wherein said

historical period is the previous preset period and wherein the over capacity value is a

workload greater than or equal to 100 percent (See column 2, lines 40-51, column 3, lines

50-55, column 4, lines 1-3 and 33-45, column 5, lines 36-55 and 60-65, column 6, lines

1-13 and 18-37, column 8, lines 61-67, and column 9, lines 1-7, wherein workload data is

stored and obtained for a predetermined period of time. See column 8, lines 23-40,

wherein the past trend information is used to show patterns. See figures 4 and 5, column

3, lines 50-54, column 4, lines 1-3 and 18-38, column 7, lines 34-43, column 8, lines 61-

67, and column 9, lines 1-13, which discusses capacity signals (flags) when an over

capacity situation has been detected in the workload (usage) historical data. Figure 5 indicates that the workload value of over 100 percent is considered over capacity).

However, Mowery et al. does not expressly disclose that the predetermined over capacity value for the sum of selected designated days is about 700 percent or that the historical period is the previous ten days.

Mowery discusses using historic workload data for a preset period to identify patterns that are employed when making decisions concerning scheduling goods deliveries, as stated in column 8, lines 24-40. Furthermore, Mowery discloses that over capacity is considered over 100 percent, as shown in figure 5, and identifying spikes in the workload usage during preset time periods, as stated in column 6, lines 20-30. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose 10 days as the preset period and to set an overcapacity sum for this time period in order to more accurately optimize the goods delivery by identifying overcapacity trends in data that are not economically beneficial. A capacity value sum of over 700 percent for 10 days would indicate that an overcapacity value occurred multiple times during the period, thus showing a bad pattern for the historic period.

19.   As per claim 7, Mowery et al. teaches the method comprising the step of setting a respective under capacity flag after determining that said set of preselected workload values are each less than a predetermined under capacity value over a historical period (See column 2, lines 40-51, column 3, lines 50-55, column 4, lines 1-3 and 33-45, column 5, lines 36-55 and 60-65, column 6, lines 1-13 and 18-37, column 8, lines 61-67, and column 9, lines 1-7, wherein workload data is stored and obtained for a predetermined period of time. See figures 4 and 5, column 3, lines 50-54, column 4, lines 1-3 and 18-

38, column 7, lines 34-43, column 8, lines 61-67, and column 9, lines 1-13, which

discusses capacity signals (flags) when an under capacity situation has been detected in

the workload (usage) historical data. Deliveries should be made when the signal

indicates that certain customer's tanks are under capacity).

20.   As per claim 8, Mowery et al. discloses the method wherein a preselected

workload value is set for the delivery zone/capacity matrix and wherein said historical

period is the previous preset period (See figures 4 and 5, column 3, lines 50-54, column

4, lines 1-3 and 18-38, column 7, lines 34-43, column 8, lines 61-67, and column 9, lines

1-13, which discusses setting workload values for the capacity matrix/delivery zone that

identify the workload as at a minimum/under capacity. See figure 5, column 2, lines 53-

57, column 5, lines 10-16, 30-55, and 60-67, column 6, lines 1-7 and 20-25, column 7,

lines 34-44, which teaches looking at used slot (levels) information about a specified

period of days).

       However, Mowery et al does not expressly disclose that the preselected workload

value is less than about 50 percent and wherein the historical period is ten days.

       Mowery et al. teaches that the customer is allowed to specify the minimum levels

and historical changes acceptable to them, as stated in column 8, lines 24-40. It would

have been obvious to one of ordinary skill in the art at the time of the invention to allow a

customer to chose a workload value of less than 50 percent and a historic period of ten

days in order to make the system more user friendly and adaptable to the specific needs

of the user.

21.   As per claim 12, Mowery et al. discloses the method wherein the step of

predicting future capacity utilization further comprises the step of determining that the

trend line of the capacity utilization for a first fixed period of workload values and that

the trend line indicates the usage is changing (See column 8, lines 30-40, which discuss

looking at trends in the data through analysis, this analysis indicating an increase in the

pattern of the historical data. See column 5, lines 35-55 and 60-55, and column 6, lines

1-10 and 18-36, which discuss predicting whether the trend line of the capacity usage of a

plant is changing looking at historical usage data during a fixed time period). However,

Mowery et al. does not expressly disclose that the usage is increasing when the slope of

the regression line for the period is greater than zero within a predetermined confidence

interval.

Mowery et al. discusses using forecasting techniques to predict capacity

utilization by looking at trends in past usage data to identify increases, as stated in

column 8, lines 30-40. It is old and well known that a slope greater than zero indicates

that a trend line is increasing in value. It is also old and well known in statistics to use

confidence intervals when sampling populations of data. It would have been obvious to

one of ordinary skill in the art at the time of the invention to utilize these old and well-

known techniques to analyze the utilization trends in order to more accurately predict

usage needs, thereby optimizing delivery schedules, minimizing supplier costs, and

meeting customer needs, as stated in column 2, lines 20-25 and 30-33, column 5, lines

51-59, and column 8, lines 24-40.

22.   As per claim 13, Mowery et al. discloses the method wherein the step of

predicting future capacity utilization further comprises the step of determining that the

trend line of the capacity utilization for a first fixed period of workload values and that

the trend line indicates the usage is changing (See column 8, lines 30-40, which discuss

looking at trends in the data through analysis, this analysis indicating an decrease in the pattern of the historical data. See column 5, lines 35-55 and 60-55, and column 6, lines 1-10 and 18-36, which discuss predicting whether the trend line of the capacity usage of a plant is changing looking at historical usage data during a fixed time period). However, Mowery et al. does not expressly disclose that the usage is decreasing when the slope of the regression line for the period is less than zero within a predetermined confidence interval.

Mowery et al. discusses using forecasting techniques to predict capacity utilization by looking at trends in past usage data to determine a decrease, as stated in column 8, lines 30-40. It is old and well known that a slope less than zero indicates that a trend line is decreasing in value. It is also old and well known in statistics to use confidence intervals when sampling populations of data. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize these old and well-known techniques to analyze the utilization trends in order to more accurately predict usage needs, thereby optimizing delivery schedules, minimizing supplier costs, and meeting customer needs, as stated in column 2, lines 20-25 and 30-33, column 5, lines 51-59, and column 8, lines 24-40.

23.   As per claim 14, Mowery et al. discloses the method wherein said first fixed period is seven days (See column 6, lines 1-10 and 19-25, wherein the first fixed period is seven days). However, Mowery et al. does not expressly disclose a confidence interval and that the confidence interval is about 95 percent.

Mowery et al. discusses using forecasting techniques to predict capacity utilization by looking at trends in past usage data. It is old and well known in statistics to

use confidence intervals when sampling graphed populations of data. Furthermore, using

a confidence interval of about 95 percent is a statistical standard. It would have been

obvious to one of ordinary skill in the art at the time of the invention to utilize confidence

intervals when analyzing the utilization trends in order to more accurately predict usage

needs, thereby optimizing delivery schedules and minimizing supplier costs, as stated in

column 2, lines 20-25 and 30-33, and column 5, lines 51-59.

24.   As per claim 15, Mowery et al. discloses the method wherein said first fixed

period is seven days (See column 6, lines 1-10 and 19-25, wherein the first fixed period is

seven days). However, Mowery et al. does not expressly disclose a confidence interval

and that the confidence interval is about 95 percent.

Mowery et al. discusses using forecasting techniques to predict capacity

utilization by looking at trends in past usage data. It is old and well known in statistics to

use confidence intervals when sampling graphed populations of data. Furthermore, using

a confidence interval of about 95 percent is a statistical standard. It would have been

obvious to one of ordinary skill in the art at the time of the invention to utilize confidence

intervals when analyzing the utilization trends in order to more accurately predict usage

needs, thereby optimizing delivery schedules and minimizing supplier costs, as stated in

column 2, lines 20-25 and 30-33, and column 5, lines 51-59.

25.   As per claim 16, Mowery et al. teaches the method wherein said specified period

of time is a preset number of days (See figure 5, column 2, lines 53-57, column 5, lines

10-16, 30-55, and 60-67, column 6, lines 1-7 and 20-25, column 7, lines 34-44, which

teaches looking at used slot (levels) information about a specified period of days. Figure

5 shows 3 months worth of data). However. Mowery et al. does not expressly disclose that the preset number of days is thirty days.

Mowery et al. discusses using forecasting techniques to predict capacity utilization by looking at trends in preset time period's usage data. It would have been obvious to one of ordinary skill in the art at the time of the invention to specify a specific number of days, such as one month/thirty days, in order to in order to more accurately predict the plant's current usage needs, thereby optimizing delivery schedules and minimizing supplier costs, as stated in column 2, lines 20-25 and 30-33, and column 5, lines 51-59.

26.   Claims 19-23 and 28-32 recite equivalent limitations to claims 3-8 and 12-16, respectively, and are therefore rejected using the same art and rationale relied upon in the rejection of claims 3-8 and 12-16, respectively.

27.   Claims 35-40 and 44-48 recite equivalent limitations to claims 35-40 and 12-16, respectively, and are therefore rejected using the same art and rationale as applied in the rejection of 3-8 and 12-16, respectively.

Response to Arguments

28.   Applicant's arguments with regards to Mowery et al. (U.S. 5,983,198) have been fully considered but they are not persuasive. In the remarks, Applicant argues that Mowery et al. does not teach or suggest (1) defining a delivery agent capacity utilization matrix having a plurality of delivery slots for each zone, wherein the plurality of delivery slots relate to the total number of delivery vehicle slots for the delivery agent and define a delivery capacity of the delivery agent, (2) the delivery capacity of a delivery agent and basing the delivery schedule on the capacity of the delivery agent to deliver the product,

(3) delivery slots that are a portion of a delivery vehicle used to deliver a good, the number of delivery slots present in a delivery agent's truck, and that Mowery et al. does not use the term "delivery slot" anywhere in the patent, (4) determining a respective zone maximum number of delivery slots and a respective number of used delivery slots for a specified period of time within the respective delivery zone and updating the respective delivery agent capacity utilization matrix for the specified period after the order has been included within said respective number of used delivery slots, or (5) predicting the probability of a future respective used slot being full based on historical over capacity conditions and predicting whether the trend line is changing.

In response to argument (1), Examiner respectfully disagrees. This limitation states that the utilization matrix has a plurality of delivery slots for each zone, wherein the plurality of delivery slots relate to the total number of delivery vehicle slots for the delivery agent and define a delivery capacity of the delivery agent. Therefore, as claimed the slots needed in each zone relate to the slots utilized in the delivery agent and the slots needed in the zone define the capacity of the agent. See column 7, lines 13-30 and 40-46, column 8, lines 40-46, column 9, lines 1-25, of Mowery et al. wherein a capacity matrix maintains information concerning portions of inventory needed per zone, this portion defining the capacity needed to be filled in the agent for delivery.

In response to argument (2), Examiner respectfully disagrees. Mowery et al. discusses optimizing delivery routes by determining amounts of inventory for delivery. A factor in determining the amount delivered is both the capacity able to be delivered as well as the portion of the delivery agent utilized. See column 9, lines 10-25. The delivery schedule is based on the truck utilization and the availability of the zone to

accept the delivery. Examiner points out that the claims recite that it is the ability of the customers in the zone to accept the order that defines the capacity held in the slots of the delivery agent. For example, claim 1 states that a plurality of delivery slots define the delivery capacity of a delivery agent and that whether or not an order can be shipped is determined based on the availability delivery slots. Examiner points out that two types of slots are recited in the claims, delivery vehicle slots and delivery slots. The delivery vehicle slots are defined in the claims as a portion of the delivery vehicle used to deliver the good (see preamble, claim 1). Delivery slots are defined in the claims as contained and located in the delivery zone, and thus not a part of the delivery agent. Therefore, based on the limitations of the claims, it is the zone's capacity that directly defines the capacity of the delivery agent.

In response to argument (3), Examiner respectfully disagrees. The term slot, in its broadest reasonable interpretation, is defined as an assigned place in a sequence or schedule and also as a place, portion, or position. As discussed above, two types of slots, delivery vehicle slots and delivery slots, are present in the claims. While Mowery et al. does not specially contain the word slot, Mowery et al. discloses the analogous concept of scheduled portions within the tank of the trunk that are assigned to a specific delivery. See column 9, lines 10-25, which discusses utilized capacities/portions of trucks. Therefore, Mowery et al. does discuss the total amount (the number of portions) that is present and used to deliver a good in a delivery agent's truck.

In response to argument (4), Examiner respectfully disagrees. Examiner again points out that the claims contain both delivery vehicle slots and delivery slots. The first part of this argument deals with the delivery slots that are contained within the delivery

location (i.e. the portion of the tanks of the customers available to accept a delivery).

Using data received by monitoring the customers and also customer specifications (such

as a minimum and maximum inventory level and acceptable times for receiving

deliveries), the system determines the portion of the tank that is used and the portion of

the tank that can accept a delivery for each customer within a zone.

See column 3, lines 51-54, column 4, lines 18-32,column 5, lines 50-60, column 8, lines

24-29 and 61-67, and column 9, lines 1-14, wherein a delivery zone is an area with a

group neighboring customers, which would be in at least one zip code, that have tanks

with usages that allow for servicing. Figure 4 specifically discloses these slot levels (or

portions of the tank) and figure 1 shows the multiple tanks in a zone. Mowery et al. also

discloses updating the respective delivery agent capacity utilization matrix for the

specified period after the order has been included within said respective number of used

delivery slots. See figure 5, column 3, lines 50-55, column 4, lines 1-45 and 56-61,

column 5, lines 30-50, column 7, lines 15-33, and column 9, lines 1-13, wherein the

central system is updated to reflect the scheduled delivery of the goods and the respective

number of slots (levels) of capacity delivered and utilized in a period. Based on the term

"delivery slot" in this limitation, it is assumed that the used delivery slots are within the

zone.

In response to argument (5), Examiner respectfully disagrees. As discussed

above, a slot is contained in the area to which the delivery is to be made. A slot is a

portion of the tank of the receiver of the good. The system has the ability to monitor

usage data of the customers and then uses this historical data to predict whether or not a

slot will be full at a specific time in the future. See column 8, lines 23-40, which

discusses specifications of the customers, such as defining minimum and maximum

inventory levels. The maximum inventory level (over capacity) defines whether or not a

good can be delivered because about this point no deliveries can occur. See figure 5.

This trend is predicted dynamically, and uses a preset number of days in past to

determine the usage pattern. Therefore, the system would predict and account for a trend

line that is changing. See column 5, lines 36-55 and 60-65, and column 6, lines 1-13 and

18-37.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of

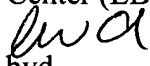time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Beth Van Doren whose telephone number is (571) 272-

6737. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

bvd

May 2, 2005

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